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Claims 1-27 (cancelled)

28. A communications arrangement forming part of a communications system, the arrangement comprising: one or more Local Area Networks (LANs); one or more gateway network elements connected to each LAN; and one or more further network elements which, together with the one or more gateway elements, form at least a part of a routing area, the one or more gateway elements acting as an interface between the one or more further elements and the one or more LANs, wherein the one or more further elements are intermediate systems, but the one or more gateway elements and the one or more further elements are configured such as to make the one or more further elements appear as end systems as far as the rest of the communications system is concerned.

29. The communications arrangement according to claim 28, in which the or each gateway network element has one or more digital communication channels (DCCs) connected to respective ones of said further elements, each of the one or more DCCs being provided with manual end-system adjacencies for at least some of the further elements, and wherein each of the one or more DCCs has its "external domain" attribute flag set TRUE.

30. The communications arrangement according to claim 29, in which those further elements which are directly connected to the or one of the gateway network elements by a DCC are configured as a Level 2 intermediate system and have their "external domain" attribute flag set TRUE for the circuit using said DCC, and in which said DCC is supplied with a length-zero reachable address prefix.

31. The communications arrangement according to claim 30, in which the gateway network element has two DCCs each of which gives access to one of the further elements

on a corresponding DCC thereof, the further elements being connected in a chain configuration so as to form a ring with the gateway network element.

32. The communications arrangement according to claim 30, in which the gateway network element is connected to the further elements by only one DCC.

33. The communications arrangement according to claim 32, in which there is set up on said one gateway DCC a manual end-system adjacency for all the further elements, the "external domain" attribute flag is set TRUE for that one DCC and for the corresponding DCC of the one of the further elements which terminates the DCC at the other end thereof, and a length-zero prefix is set up on the corresponding DCC of the terminating further element, said terminating further element being configured as a Level 2 intermediate system.

34. The communications arrangement according to claim 29, comprising a single gateway element having one or two channels provided with manual end-system adjacencies for all of the further elements.

35. The communications arrangement according to claim 29, in which there are two of the gateway elements connected to respective ones of said one or more LANs, and in which a plurality of the one or more further elements is connected between the two gateway elements.

36. The communications arrangement according to claim 35, in which each of the gateway network elements and the further elements has two DCCs, a first DCC of one gateway network element being connected to a DCC of a first one of the further elements, a second DCC of the same gateway network element being connected to a DCC of a second one of the further elements, a first DCC of the other gateway network element being connected to a DCC of a third one

of the further elements, and a second DCC of the other gateway network element being connected to a DCC of a fourth one of the further elements.

37. The communications arrangement according to claim 36, in which each DCC of those further elements which are directly connected to at least one of the gateway elements has its "external domain" attribute flag set TRUE for a circuit using said DCC and has a reachable address prefix of length zero on the circuit connecting it to the gateway element, and in which the first DCC of each gateway element is set with manual end-system adjacencies for the first and second of the further elements, and in which the second DCC of each gateway element is set with manual end-system adjacencies for the third and fourth of the further elements.

38. The communications arrangement according to claim 29, in which the or each gateway element comprises a static route record in which has been manually entered one or more ranges of consecutive system identifiers corresponding to the manual end-system adjacencies.

39. The communications arrangement according to claim 29, in which a change on an intermediate system forwarding process is implemented such that, if there are two, equal-cost manual adjacencies matching a destination address of a given packet and one of these is associated with a circuit on which the packet was received, then the packet is forwarded onto another circuit.

40. The communications arrangement according to claim 28, in which a message packet, which is generated or forwarded in the part of the routing area by one the further elements and is destined for a network element outside said part of the routing area but in the same area as the further elements, is not discarded by a Level 1 intermediate system handling the message packet if said intermediate system has access to an attached Level 2 intermediate system forming part of the routing area.

41. The communications arrangement according to claim 28, in which a message packet, which is generated in the routing area or the part of the routing area defined by the gateway element and further elements and is destined for a network element outside the routing area or the part of the routing area, is not discarded by a Level 1 intermediate system handling the message packet if said intermediate system has access to a Level 2 intermediate system forming part of the routing area or the part of the routing area.

42. The communications arrangement according to claim 28, in which the one or more further elements comprise a peripheral domain.

43. The communications arrangement according to claim 28, comprising a plurality of nodes including a first set consisting of the further elements and a second set excluding the further elements, in which the second set comprises end systems (ES) and/or intermediate systems (IS), in which each node in the second set has a connection to every other node in the second set, and in which the connections only pass through nodes of the second set.

44. The communications arrangement according to claim 43, in which all the further elements lie in a single IS-IS area, and in which all the nodes of the second set which are directly connected to the one or more of the further elements lie in the IS-IS area.

45. The communications arrangement according to claim 43, in which the further elements are connected to the nodes of the second set by more than one circuit; and in which each of the circuits provides access from at least some of the further elements to all of the nodes of the second set.

46. The communications arrangement according to claim 43, in which each further element directly connected to a node of the second set comprises means for discarding IS-IS

hello protocol data unit (IIH) packets and sequence number protocol data unit (SNP) packets received from a node of the second set.

47. The communications arrangement according to claim 46, in which each further element directly connected to a node of the second set is configured as Level 2 IS and comprises means for monitoring a receipt of IS hello protocol data units (ISH) packets and for maintaining a length-zero reachable address prefix (RAP) for the circuit from the further element to the node of the second set while the last received ISH packet is still valid.

48. The communications arrangement according to claim 47, in which each further element comprises a network address, and in which each further element directly connected to a node of the second set comprises means for generating end system hello protocol data unit (ESH) packets containing the addresses of all the further elements of which it is aware.

49. The communications arrangement according to claim 48, in which each further element directly connected to a node of the second set comprises means for detecting a change in a topology of a part of the communications arrangement made up of the further elements and their interconnection, and means for sending, when no change is detected, the ESH packets to the nodes of the second set with a frequency the same as an average generation frequency of LSPs by the first set of further systems.

50. The communications arrangement according to claim 49, in which each further element directly connected to a node of the second set comprises means for sending the ESH packets to the nodes of the second set as soon as a change is detected.

51. The communications arrangement according to claim 50, in which the further elements directly connected to a node of the second set comprise synchronous digital hierarchy (SDH) transmission equipment, in which the SDH transmission equipment comprises a Q-interface.

52. The communications arrangement according to claim 51, in which a message packet, which is generated or processed by one of the further elements and is destined for a node of the second set that belongs to the routing area the same as the further element, is not discarded by a Level 1 intermediate system handling the message packet if said intermediate system has access to an attached Level 2 intermediate system in the first set.

53. The communications arrangement according to claim 52, in which the communications system of which it forms a part is an SDH communications system.